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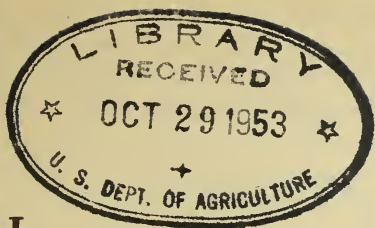
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SPECIAL.

United States Department of Agriculture,

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RYE IN THE COTTON BELT.

By CLYDE E. LEIGHTY,

Agronomist in Charge of Eastern Wheat Investigations, Bureau of Plant Industry.

GENERAL CONSIDERATIONS.

As a crop for the cotton belt, rye may be used to advantage in many sections. It can be used as a winter cover crop, a winter grazing crop, or as a seed crop. The straw is also valuable for several purposes. Rye is adapted to larger areas than wheat, being better suited to sandy soils. It stands cold weather better than oats. The grain of rye can usually be sold at the larger markets, but unless the grower produces a carload, or rye is produced in the community sufficient for carload shipments, it usually can not be sent to these markets with profit. Rye grain can be used for stock feeding, but it is not very satisfactory for this purpose except as a feed for hogs.

The machinery used for oats, barley, or wheat is suitable for handling rye, but if these crops also are not grown the proper machinery will have to be provided either by the grower or by some one in the community. A few persons in each community may find it profitable to grow rye with the object of supplying seed to their neighbors, should the general sowing of rye the following year appear probable.

RYE GRAIN AS A FEED.

As a feed for hogs, rye grain fed in combination with skimmed milk has about the same value as barley grain so fed. Neither is as

NOTE.—Intended for farmers in the cotton belt who desire to diversify their farming because of the economic crisis which adversely affects the cotton crop at this time.

good for fattening as corn, but the quality of pork produced is better. Rye shorts is not a satisfactory hog feed. Rye may be fed to work horses, from 2 to 4 pounds daily in addition to other grain. Ground rye or rye bran may be fed to milch cows, not more than 3 pounds being used daily.

SOILS ADAPTED TO RYE.

Rye can be grown on almost any of the well-drained soils of the cotton belt. It is better adapted to the lighter loams and sandy soils than to the heavier clay soils. It is much better adapted to the sandy and poorer soils than is wheat. It will also endure a greater amount of acidity in the soil than will wheat, oats, or barley. Because of these characteristics rye may often be grown in the sandy soils of the coastal plains and in poor soils where other cereals would not succeed. The growing of rye should not be attempted on lands subject to overflow or on which water stands after rains.

FERTILIZERS FOR RYE.

Although, as already stated, rye may grow on poor soils, large yields of forage or grain can be expected only on soil that is naturally rich or well fertilized. Stable manure is the best fertilizer for general use with rye. When commercial fertilizers only are available, acid phosphate at the minimum rate of 200 to 300 pounds per acre is generally advisable, this to be applied when the crop is sown. Cottonseed meal may also be used to supply nitrogen, this being applied two or three weeks before seeding or at the time of seeding, but not in contact with the seed. Nitrate of soda may often be used to good advantage. On the poorer soils 25 pounds may be applied at seeding time and 50 to 75 pounds applied as a top-dressing after growth starts in the spring. On richer soils the spring application is generally sufficient. On soils that are naturally rich or that have been fertilized for preceding crops, fertilizers for the rye crop may not be necessary.

PREPARATION OF SEED BED.

While rye generally does better than any other cereal on a poorly prepared seed bed, this is not sufficient reason for neglecting the proper preparation of the soil. The extra expense incurred in preparing a good seed bed will be more than repaid by the additional yield obtained. If rye is to follow an uncultivated crop, the land should be plowed 5 to 7 inches deep at least four weeks before seeding, or earlier if practicable. Immediately after plowing, the land should be gone over with a harrow or other implement suitable for breaking clods and reducing the topsoil to a fine mellow condition.

After this it should be so handled as to prevent the growth of weeds and to provide a seed bed firm and compact beneath but loose and mellow in the upper 2 or 3 inches. The exact method for securing these results must be varied for individual conditions. When rye is to follow a cultivated crop that has been removed, the land may be plowed 3 or 4 inches deep and harrowed if there are many weeds present, or it may be disked and harrowed, as conditions seem to demand; but the aim should always be to secure a seed bed such as that described above. Cowpea stubble can usually be prepared for rye by disking and harrowing. Rye may be sown broadcast in cotton or other standing crops without previous soil preparation, but it should be covered after sowing. A broad sweep, double shovel, or cultivator is a suitable implement for covering, passing once between each two rows. Cotton or corn is not injured by this treatment.

TIME AND METHOD OF SEEDING.

The time of seeding rye depends upon the use to be made of the crop. If it is intended as a cover crop to prevent the washing of the soil and the leaching out of plant food or if intended for grazing purposes, it should be sown between September 15 and October 15 in the northern part of the Gulf States and about two weeks later in the southern part. A satisfactory time to sow in the cotton fields is just after the first or second picking. When intended for seed purposes rye should be sown the first half of November in the northern part of the Gulf States and the latter half of that month in the southern part. It may even be sown as late as January, but with poorer chance of success. Rye can be sown with success later on fertile land in a good seed bed than it can on poor land in a poor seed bed.

When sown in a standing crop, such as corn or cotton, rye should be sown broadcast and covered with a plow, sweep, or cultivator, as previously described. It is better to sow rye in drills 6 to 8 inches apart with a regular grain drill. Less seed is then required, it saves labor, and a more even and uniform stand is secured. Many farmers do not have drills, and hence must depend on sowing broadcast. When a drill is not available, rye may be sown broadcast by hand or with a broadcast seeder and covered by harrowing. The one sowing the seed may save labor and can sow more evenly and rapidly by standing or sitting on the rear end of a wagon as it is drawn slowly back and forth across the field. Some farmers sow the grain from horseback. This plan is especially good when sowing in corn or cotton rows. Rye may be sown by hand or with a planter in rows 18 to 24 inches apart.

RYE AS A COVER AND GRAZING CROP.

Rye alone or with hairy vetch or crimson clover is frequently sown in the cotton belt with good results as a cover or grazing crop. The crop should be sown early to allow a good growth before plowing, and a variety making a large early growth, such as Abruzzes, should be used. Better results are secured by sowing rye with vetch or clover than by sowing it alone.

RATE OF SEEDING.

When sown early on good land in a well-prepared seed bed with a drill, 3 or 4 pecks per acre is a sufficient quantity of seed; on poorer lands and for later sowings, 4 or 5 pecks are required. The Abruzzes variety will give excellent results from seedings of 2 pecks and 3 pecks per acre, respectively, for the two conditions mentioned above. When sown broadcast and when sown for pasturage, at least 1 peck more per acre than the quantities stated should be sown. Under the poorest conditions 6 or 8 pecks are required.

VARIETIES.

There are few varieties of rye. A kind known as Southern rye is practically the only one now grown in the warmer parts of the cotton belt. The Abruzzes (or Abruzzi) rye, a recently introduced variety, is giving excellent results in South Carolina, and promises to be the best kind for a large part of the cotton belt, both for grain and as a pasture or cover crop. It stands more erect, produces more rank growth, and yields more grain than other sorts that have been tried there. The supply of seed of this variety is at present limited, and if seed of this variety can not be secured, home-grown seed should be used, if possible. North Carolina and Virginia Winter are varieties of rye well adapted to the cotton belt.

